

PATENT CLAIMS

1. A liquid atomizer unit having a double nozzle system for fire extinction, comprising a cup (1) with a bottom (2), said cup (1) containing a mandrel (7) which extends through the cavity of the cup, said mandrel (7) comprising a centre hole (10) as well as an end (16) comprising an elevation (21) with a central hole (17) connecting the centre hole (10) of the mandrel to the atmosphere, a baffle (18) being arranged on the central shaft of the centre hole in front of and in parallel with the centre hole (10), said baffle (18) being disposed on a leg (19) and constituting, in combination with the centrally located hole (17), one nozzle of the liquid atomizer for liquid atomization, **characterized in** that the mandrel (7) is penetrated by one or more slots or holes (11), all of which are positioned within the cavity of the cup, and whose total area is larger than the cross-sectional area of the centre hole (10) of the mandrel, and that, outside the periphery (12) of the cup and above the first nozzle, the mandrel (7) comprises a face (13) which forms a fully circular gap (14) between the peripheral face (12) of the cup and the mandrel face (13), said gap (14) constituting the second nozzle of the liquid atomizer for spreading atomized liquid from the first nozzle in an entire 360° circle.
2. A liquid atomizer unit according to claim 1, **characterized in** that the face (13) is present on a leg (19) which is secured to the mandrel (7) at a point (20), said point (20) being spaced a distance from the face (13) of at least 2 x the diameter of the face (13).
3. A liquid atomizer unit according to claim 1 or 2, **characterized in** that the face (13) has a diameter which is 70% to 130% of the diameter of the outer periphery of the cup (1).
4. A liquid atomizer unit according to any one of the preceding claims,

characterized in that the slots or holes (11) of the mandrel extend over a length of more than 2 x the diameter of the bore of the cup.

5 5. A liquid atomizer unit according to any one of the preceding claims, **characterized in** that the ratio of the longitudinally sectional area to the cross-sectional area of the cavity of the cup is 0.10 – 0.20.

10 6. A liquid atomizer unit according to any one of the preceding claims, **characterized in** that the cup (1) comprises an outer face which contains a convex conical face (6) with an angle of between 20° and 130°.

15 7. A liquid atomizer unit according to any one of the preceding claims, **characterized in** that the bottom (2) is penetrated by holes (3) or one or more grooves (4, 5), or that, as an alternative to this, holes or slots (8) are provided on the side face of the cup over the conical member (9).

20 8. A liquid atomizer unit according to any one of the preceding claims, **characterized in** that it is mounted in a nozzle housing (23) having a water connection gate (24), said nozzle housing (23) comprising a concave conical face (25) for cooperation with the conical face (6) of the liquid atomizer thus comprising a smaller diameter than the largest diameter over the conical face (6) of the liquid atomizer and a conical angle greater than or equal to the conical angle of the liquid atomizer.

25 9. A liquid atomizer unit according to claim 8, **characterized in** that it is secured in the nozzle housing (23) by legs (27) which press against the end face (16) of the mandrel and are fixed by the elevation (21) at the outlet of the nozzle bore (17), said legs (27) being held against the conical face (25) in the nozzle housing (23) by a thermal release element (26) arranged at an
30 angle of 0° - 90° relative to the longitudinal shaft of the liquid atomizer unit.